garden house design

Report of Daytime Bat Survey

St Barnabas Hospice

Worthing

on

16th April 2010



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2 Background

Planning permission has been given to demolish the current buildings known as St Barnabas Hospice and to replace the buildings with a range of dwellings on the site.

A daytime bat survey was undertaken to consider if the buildings to be demolished were utilised by bats.

The Bat Conservation 'Bat Surveys – Good Practice Guidelines' have been taken into account to determine the extent of the investigative work required on this site.

3 Location

Map reference

TQ 116046

Address

St Barnabas Hospice, Columbia Drive, Worthing, West Sussex, BN13 2QF

4 General Description of Buildings

The site, currently used as a hospice, lay in a residential area alongside and to the north of a wide, busy and well lit dual carriageway.

The buildings on the site consisted of an extensive area of flat roofed single storey buildings extending from a two storey building with a hipped roof covered with lined interlinked concrete tiles. A small single storey area with a hipped roof abutted the two storey section. The pitched roof of a chapel rose above the flat roof and was covered with slate tiles. A small quadrangle lay within the flat roofed area. A void lay between suspended ceilings and the flat roof and a loft lay over the only two storey section of the building

The flat roofed building was all of a similar structure externally with a section of plastic paneling under the eaves with small areas of plastic paneling over some of the walls. The two storey section featured a large area of plastic paneling. A canopy passed over the entrance.

A separate rectangular detached flat roofed building lay to the north of the site alongside a flat roofed double garage and two small timber sheds lay. The sheds was unsuited to providing roosting to bats.

The buildings were largely surrounded by a tarmaced area providing parking to the north and western sides of the site with gardens and lawn on the south and eastern sides. The perimeter was of the site hedged with small trees sited at intervals within the hedge.

5 Surrounding Habitat

The building lies in a relatively densely populated residential area with no areas of woodland in the vicinity.

There are no Sites of Special Scientific Interest (SSSI) within a three kilometre radius.

6 Bat Legislation

All species of bat and their breeding sites or resting places (roosts) are protected under Regulation 39 of the Conservation (Natural Habitats) Regulations 1994 (amended 2007 and 2009) and Section 9 of the Wildlife and Countryside Act 1981. European protected animal species and their breeding sites or resting places are protected under Regulation 39.

It is an offence to:-

- Deliberately capture, injure or kill a bat
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time)
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat
- Intentionally or recklessly obstruct access to a bat roost

The threshold above which a person will commit the offence of deliberately disturbing a wild animal of a European protected species was raised in the Conservation (Natural Habitats) Regulations 1994 amendment of 2007 and further amended in 2009. A person will commit an offence if he deliberately disturbs such animals:-

(a) to impair their ability –

(i) to survive, breed, or rear or nurture their young; or

(ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or

(iii) to affect significantly the local distribution of abundance of that species to which they belong

A Natural England, European Protected Species Licence is required to permit otherwise unlawful activities, and can only be granted for certain purposes under Regulation 44(2)(e) of the Conservation (Natural Habitats, &c.)Regulations 1994, for works to be carried out to a bat roost.

In circumstances where best practice guidance either cannot be followed or is not applicable, licences can be obtained to allow persons to carry out activities that would otherwise be prohibited under Regulation 44(2)(e-g)& 44(3)(a-b), without committing an offence. Natural England has powers to grant licences in England for the purposes below:

- Preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment
- Preventing the spread of disease;
- Preventing serious damage to livestock, foodstuffs for livestock, crops, vegetables, fruit, growing timber or any other form of property or to fisheries;
- Science or education, conservation, ringing or marking;
- Possession of species or derivatives.

Natural England can only issue a licence if it is satisfied that the activity meets one of the above purposes **and** is also satisfied that there is:-

- Regulation 44(3) (a) that there is no satisfactory alternative, **and**
- Regulation 44(3) (b) that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range

Evidence of the proposed provisions to accommodate the bats in the future would be required for a licence to be granted where needed —for example, an alternative roost may need to be provided.

7 Objectives of the Survey

- To establish if there is evidence that bats utilise the buildings for roosting
- To investigate any areas that appeared to be used by bats for roosting in the buildings if relevant
- To consider all areas offering potential roosting opportunities to bats
- To investigate the species of bat using the buildings for roosting if applicable
- To consider the type of bat roost if applicable
- To consider access points used by bats if applicable
- To consider the implications of the proposed demolition to any bats roosting within the buildings if relevant
- To provide recommendations and advice should evidence of bats roosting or evidence of potential bat roosting be identified

8 Methodology

- A detailed inspection of the buildings was undertaken for evidence of bat activity and for bats
- The external structure of the buildings was surveyed carefully and thoroughly from the ground by eye and with binoculars and with a powerful torch where appropriate
- A loft was entered and searched for evidence of bat activity and for bats
- Consideration was given to any possible access points open to bats
- The surveyor checked for any evidence of bats including oil stains formed during entry and exit of possible roost sites, urine stains, droppings and for bats
- Equipment used included torches, binoculars, ladder and digital camera. A fibrescope and mirrors were available for use
- The surrounding habitat was considered during the survey and satellite imagery was considered for suitable habitat for bats in the area
- A desk study of the surrounding habitat was undertaken accessing appropriate websites

9 Weather during survey

12C. Dry, Few clouds. Breeze

10 Constraints

The survey was undertaken during the early spring when maternity roosts have not yet re-formed and external evidence of bat droppings are likely to have been washed or blown away over the winter

11 Outcome of Survey

11.1 Main Building

11.1.1 Flat roof

The extensive flat roof was covered with roofing felt and the edges of the felt were well sealed.

The ceilings internally were tiled and the space between the ceiling and roofing is likely to be an open void unsuited to provide roosting.

11.1.2 Pitched roof over two storey building

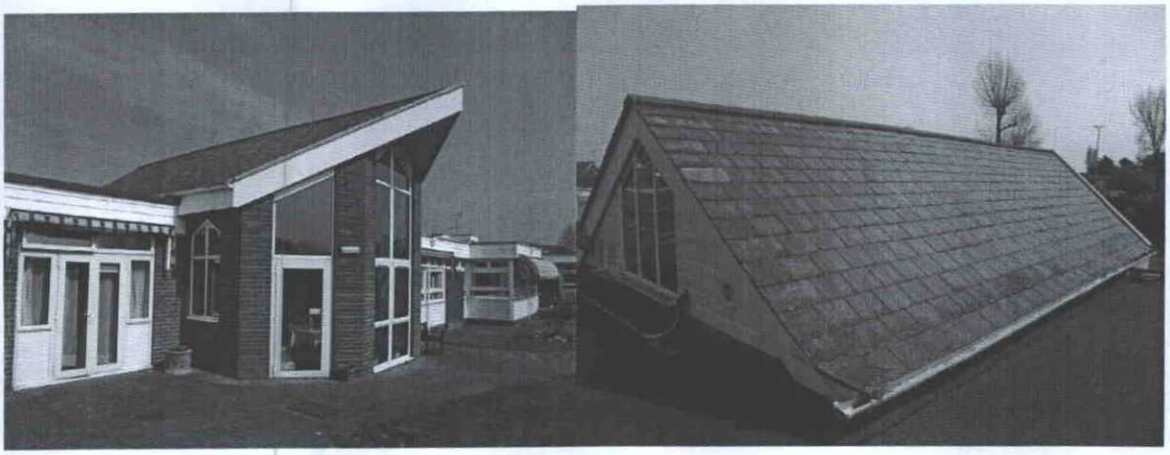


South east facing pitched roof

The concrete interlinked tiles appeared generally well sealed with large amounts of undisturbed lichen over the roof. There was access available to bats under the hip tiles and in the apex of the south east facing roof which was clear of lichen as shown below.



11.1.3 Pitched roof over chapel



The slate roof over the chapel was viewed from the flat roof and appeared to be very well sealed. One tile had slipped but this was just above the flat roof and there was no evidence to suggest that this was accessed by bats.

11.1.1 Pitched roof over single storey

There was access under the hip tiles over a single storey extension but these appeared to be filled with undisturbed moss.

11.1.2 Loft

A single loft lay under the hipped roof lined with black hessian style roof lining over the two storey building. The loft space was very cluttered with timbers due to the trussed construction and water tanks. There was no evidence of any bat droppings on the insulated floor and no bats were seen.

11.1.3 External Walls / Cladding

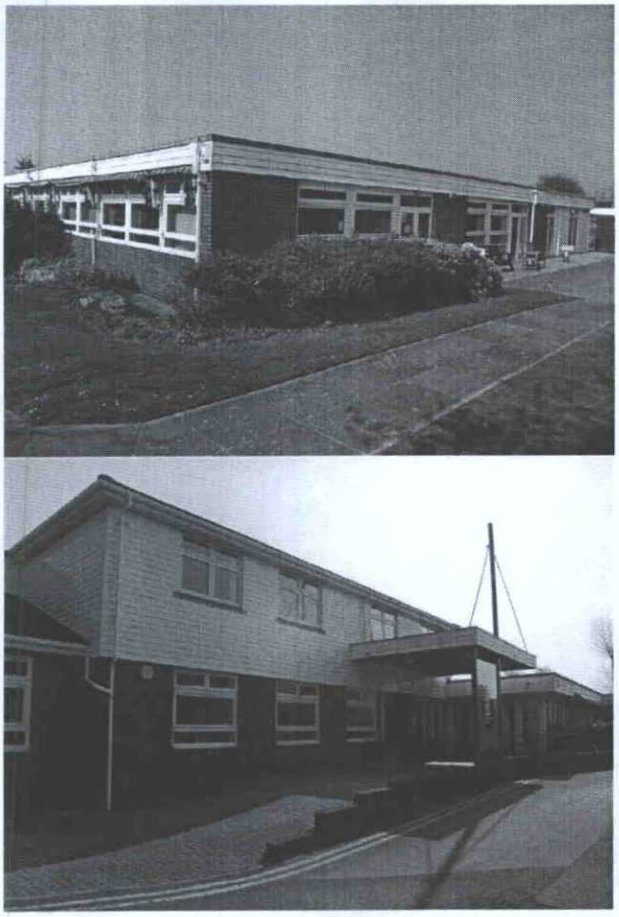
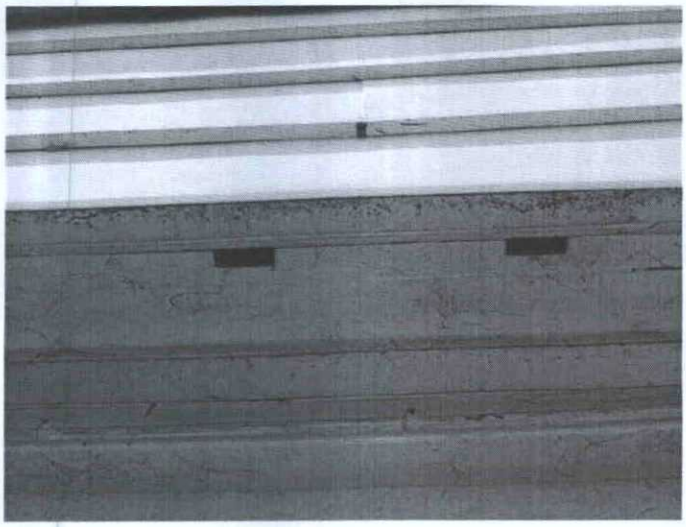


Photo showing style of wall around building Two storey reception

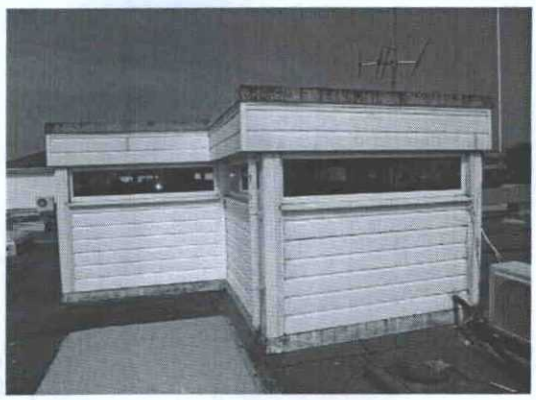
There were no cracks or crevices identified in the external brick walls around the building suitable for bats to roost.

The plastic cladding featured under the eaves and in small sections over the flat roofed building and around the first floor of the two storey area was well sealed with the exception of small area on the south east where there was access under the roofing due to the plastic cladding at the eaves buckling but there was no evidence to suggest that bats may access this space.

There were ventilation slots in a timber spacer fitted around under the plastic cladding in a large part of the building. An example is shown below. These provided good access to bats but there was no evidence seen on any of these slots to suggest they were utilised to any extent if at all by bats.



11.1.4 Water Tank



Water tank on flat roof

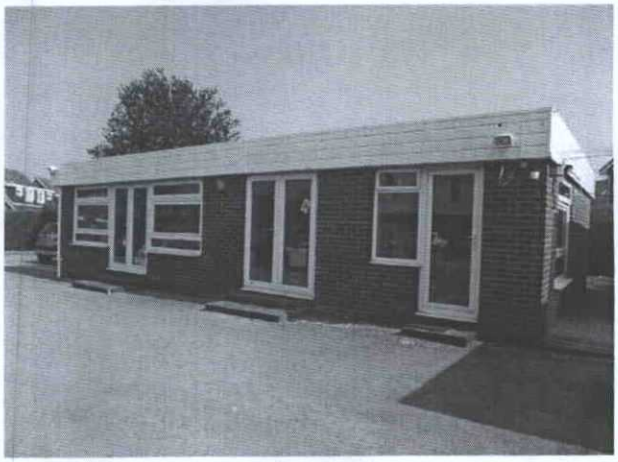
The structure on the flat roof was well sealed and did not provide roosting opportunities within the structure. The plastic panels and roof was well sealed.

11.1.5 Canopy



There was a flat roofed canopy over the main entrance door. There was access to bats into the canopy in spaces around the lighting but the potential for this to be used is very low as these remain lit at night.

11.2 Detached building



A single storey detached building of a similar structure to the flat roofed main building appeared to be well sealed and no opportunities for bats to roost were identified.

11.3 Garage

A double garage with pebble dashed concrete walls lay on the north east of the site. There was access available to bats at the eaves under metal barge board around the the flat roof but there were no suitable roosting opportunities within the garage. There was no evidence to suggest that the garage was accessed by bats.

11.4 Grounds

There were a small number of trees in the grounds but no opportunities for bats to roost within the trees were identified.

An area of garden on the south east of the site could provide good foraging to bats within shrubs and over a small ornamental pond. The perimeter of the grounds could provide some foraging.

12 Summary

The potential for bats to roost in the single storey flat roofed buildings on the site appeared to be low. There was access to the largest areas of flat roof through slots in a timber spacer at the base of plastic cladding fitted around the eaves of the building and in gaps in this cladding at the eaves in an area of the south east facing section of the building but there was no evidence seen to suggest that these areas were utilised.

The brick walls were in good condition and did not offer cracks for bats to access roosting.

Plastic cladding was featured around the entire building but this was well sealed with the exception of the small area mentioned above.

There was no evidence to suggest that bats had or were utilising a loft over the only two storey section of the building. The loft appeared to be well sealed.

There was potential for bats to roost between the roof tiles and lining over the two storey section of the building. There was access to the space between tiles and lining at the hip tiles and at the apex of the south east facing roof.

There was no evidence that bats utilised a pitched slate roof over a chapel.

A double garage and shed on the site were unsuited to providing roosting to bats and there was no

evidence in either to suggest that they had been utilised for roosting.

The grounds could provide foraging to bats but there was no evidence of any roosting potential in trees.

13 Conclusions and Recommendations

There was no evidence to suggest that the extensive flat roofed single storey buildings on the site of St Barnabas Hospice were utilised by bats for roosting. The opportunities for accessing roosting appeared to be limited to slots in a timber spaces under the plastic panelling and at the eaves of a small area of the building where the panelling had buckled slightly. There was no evidence seen to suggest that these were utilised and the potential for roosting is likely to be low. It is not felt that it is necessary to undertake any further investigative work on the flat roofed sections of the building of that the timing of work on the demolition would be of any significance to bats.

There was potential for bats to roost in between slate roof tiles and the black hessian lining over the two storey section of the building. In light of the fact that it is proposed that the building is demolished the roof should be considered further by undertaking one or two activity surveys. There was no evidence to suggest that the loft over this section was utilised as a roost. The species of bat most likely to roost between roof tiles and roof lining would be the pipistrelle, the smallest bat found in this country. If a bat roost is identified under this area of roofing a Natural England European Protected Species Licence would be required before work commenced to demolish the building and re-provision would need to be included for the species identified. Further information on these areas follows.

13.1 Activity Surveys

Activity surveys will be required in the form of one to two dusk emergence survey and one pre-dawn return survey to confirm if there is or is not a bat roost under roofing. These surveys involve monitoring the bat activity from a building by eye and with a bat detector which converts the ultrasonic calls made by bats to a sound that humans can hear. The bat activity is recorded and then analysed using an appropriate soft ware packages to assist with the identification of the species of bat seen. An evening emergence survey would be undertaken from 15 minutes before sunset for up to two hours and a pre-dawn from two hours before dawn up to sunrise during the summer months when bats are at their most active and roosting in their maternity roosts.

The best time to undertake this is between May and September and would be undertaken to:-

- Clarify if the roofing over the two storey building is utilised as a bat roost
- Consider the numbers of bats utilising the building if relevant
- Identify the access points used by bats if relevant
- Consider the type/status of bat roost/s within the building e.g. maternity, transitional if relevant
- Provide information to enable appropriate mitigation to be planned
- Provide information for a Method statement or Natural England European Protected Species licence if required

13.2 Natural England European Protected Species Licence

A Natural England European Protected Species licence would be required if a bat roost is identified in the building as the roost would be destroyed during the proposed building work.

A licence must be applied for by the developer with input from an appropriately experienced bat ecologist/consultant.

The application requires details which include the bat roost re-provision which must be appropriate for the species of bat identified, the timing of the work and how the work will be conducted to ensure that no bat is endangered or disturbed at important times of their annual life cycle. The licence application takes up to 30 working days to be considered by Natural England from the date the application is acknowledged. Planning permission would normally be required before a licence application can be submitted.

13.3 Timing of Building Work

The most suitable times to undertake building where a bat roost will be destroyed is during March / April or September/ October to ensure that a maternity roost or hibernating bats are not disturbed during important times in their life cycle or that bats are not disturbed during their most active or least active times of the year.

13.4 Removal of Roofing and care required

If a bat roost is identified under roof tiles, tiles must be removed carefully by hand and timed as described above to ensure the least disturbance to any bat roosting. A licenced bat ecologist would be required to supervise the removal of the roof tiles.

13.5 Re-provision

The species of bat most likely to roost between roof tiles and roof lining would be the pipistrelle, the smallest bat found in this country which is a crevice dweller and is often found roosting between roof tiles and lining. Re-provision, if required, would need to be made within the new buildings on the site under tiling or cladding as close to the existing roost as possible and of a similar orientation.

14 References

Bat Surveys – Good Practice Guidelines – Bat Conservation Trust

Bat Workers Manual – Joint Nature Conservation Committee

Bat Mitigation Guidelines – English Nature (now Natural England)

A Field Guide to British Bats – Frank Greenaway & A. M. Hutson

British Bats – John Altringham

Long-Eared Bats – Susan M Swift

- The two storey section was considered for evidence of bat droppings

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19 Equipment Used

Batbox Duet bat detectors with Sony minidisk recorders and headphones

Dictaphones

Head torch and torches as required

Wave pad and Batscan 9.6 for analysis

Uniden Walkie Talkies

20 Timing of Survey

Sunset was 21.16

Monitoring bat activity commenced at 20.55 and ceased at 22.20

21 Weather Conditions

Dry, overcast, slight breeze. 15C at end of survey.

22 Outcome

No bats were seen to emerge from the two storey pitched roof section of the building .

The only activity heard and or seen was from single Common Pipistrelles (Pipistrellus Pipistrellus) as follows :-

- **21.30** - seen and heard to fly past the entrance from the north west to the south east across foliage between the south eastern aspect of the two storey building (the main entrance)and car park
- **21.55** heard but not seen to pass both surveyors
- **21.57 and 21.59** heard faintly by the surveyor to the north of the building only and was thought to be passing along hedging

There was no activity seen or heard that suggested any bats had emerged from the hospice building or site. There was no evidence seen or heard of bats feeding on the site.

On arrival there were two large gulls on the small ridge of the roof of the two storey section of the building. One flew away soon after the commencement of the survey but one remained on the roof flying occasionally a very short distance away from the roof remaining over the hospice site and returning. There was nesting material on the east facing hipped roof of the two storey section.

23 Summary

There was no evidence to suggest that the building know as St Barnabas Hospice is used as a bat roost. There was no evidence to suggest that the grounds are used for foraging although they could be used at other times of year.

One Common pipistrelle was clearly seen to pass the building. Three other Common Pipistrelles were heard in the vicinity but passed.

24 Conclusions and Recommendations

There was no evidence seen to suggest that the building is used as a bat roost. It is not felt necessary to undertake any further investigative work on the two storey building.

There is always the possibility of a single bat roosting under suitable roofing and cladding. It would therefore be advisable to ensure that work to demolish the building does not commence during the winter months (November 1st to March 1st) when hibernating bats could be disturbed.

In light of the small amount of bat activity seen passing the building and the mobility of bats it is recommended that the roof tiles on the hospice are removed carefully by hand and the roofers are advised to keep a close eye for bats and cease work immediately should they see a bat and seek advice from Natural England or an appropriately experienced and licensed bat ecologist. It is also recommended that the slots around the single storey flat roofed building are checked for bat occupation before demolition although the potential is felt to be extremely low. If a bat or bat droppings noted advice should be sought.

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Report of Dusk Emergence Survey

St Barnabus, Columbia Drive, Worthing, BN13 2QF

Undertaken on 13thJune 2010

15 Background

A day time bat survey was conducted on 16th April 2010 on the buildings on the site. This survey did not identify any specific evidence to suggest the buildings were utilised for roosting by bats and there was no evidence of any bat activity within a roof void over a two storey section of the building but potential was identified for bats to roost between slate roof tiles and roof felt over the roof void. An evening survey was recommended to confirm if this area of roof was utilised by bats. It was felt that the bat most likely bat to utilise the spaces identified was the pipistrelle bat which emerges generally from sunset and up to an hour following sunset.

This report should be read in conjunction with the daytime report undertaken on 16.4.10.

16 Purpose of Survey.

The purpose of the dusk emergence survey was to :-

- To confirm if the roof over a two storey entrance area was utilised as a roost by bats
- To identify the species of bat if relevant
- To clarify numbers of bats roosting in the property and the status of the roost if appropriate
- To provide information to confirm if any action is required related to bats before and during the proposed building work

17 Surveyors

Two surveyors undertook the evening survey:-

- Sue Harris holder of a Natural England Conservation, Scientific and Educational Bat Licence and experienced with the use of bat detectors and the analysis of bat recordings
- Phil Harris experienced with the use of bat detectors and monitoring bat activity

18 Survey process

- The surveyors were positioned to the south and north of the two storey section of the building to enable the roof of this section of the building to be considered for bat activity
- The building was considered by eye constantly throughout the survey
- Bat detectors with mini disc recorder were used at all times during the survey
- Surveyors kept each other informed of any bat activity seen or heard via walkie talkies to clarify bat movement seen